

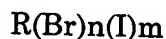
WHAT IS CLAIMED IS:

1. A fluorine-containing elastomer having a copolymer composition, which comprises 50-85% by mole of (a) vinylidene fluoride, 0-25% by mole of (b) tetrafluoroethylene, 7-20% by mole of (c) perfluoro(methyl vinyl ether), 3-15% by mole of (d)  $\text{CF}_2=\text{CFO}[\text{CF}_2\text{CF}(\text{CF}_3)\text{O}]_n\text{CF}_3$ , where  $n$  is an integer of 2-6, and 0.1-2% by mole of (e)  $\text{RfX}$ , where  $\text{Rf}$  is an unsaturated fluorocarbon group having 2-8 carbon atoms, which may contain at least one ether group, and  $\text{X}$  is a bromine or iodine atom.

2. A fluorine-containing elastomer according to Claim 1, wherein the elastomer has a solution viscosity  $\eta$  sp/c (1 wt.% methyl ethyl ketone solution at 35°C) of 0.1-2 dl/g.

3. A fluorine-containing elastomer according to Claim 1, wherein the elastomer has a solution viscosity  $\eta$  sp/c (1 wt.% hexafluorobenzene solution at 35°C) of 0.1-7 dl/g.

4. A fluorine-containing elastomer according to Claim 1, wherein the elastomer is prepared by copolymerization in the presence of a bromo and/or iodo compound represented by the following general formula:



where  $\text{R}$  is a saturated fluorohydrocarbon group or a saturated chloro-fluorohydrocarbon group, each having 2-6 carbon atoms,  $n$  and  $m$  each are 0, 1 or 2, and  $m+n$  is 2.

5. A fluorine-containing elastomer according to Claim 4, wherein the bromo and/or iodo compound is  $\text{ICF}_2\text{CF}_2\text{CF}_2\text{CF}_2\text{I}$ .

6. A fluorine-containing elastomer according to Claim 1 or 4, wherein sum total of the component (c) and the component (d) is at least 10% by mole.

7. A fluorine-containing elastomer according to Claim 1 or 4, wherein

the component (e) is  $\text{CF}_2=\text{CFOCF}_2\text{CF}_2\text{Br}$ ,  $\text{CF}_2=\text{CFBr}$ ,  $\text{CF}_2=\text{CHBr}$ ,  $\text{CF}_2=\text{CFI}$  or  $\text{CF}_2=\text{CHI}$ .

8. A fluorine-containing elastomer according to Claim 1 or 4, wherein the elastomer has a glass transition temperature  $T_g$  of  $-30^\circ$  to  $-45^\circ\text{C}$ .

9. A fluorine-containing elastomer according to Claim 1 or 4, wherein the elastomer can give a curing product having low-temperature characteristics according to ASTM D1329 after organic peroxide curing:

$$-43^\circ\text{C} \leq \text{TR}_{10} < -30^\circ\text{C} < \text{TR}_{70} \leq -20^\circ\text{C}$$

10. A fluorine-containing elastomer composition, which comprises 100 parts by weight of a fluorine-containing elastomer according to Claim 1, 0.1-10 parts by weight of an organic peroxide, 0.1-10 parts by weight of a polyfunctional unsaturated compound and not less than 2 parts by weight of an acid acceptor.

11. A fluorine-containing elastomer composition according to Claim 10, wherein not more than 40 parts by weight of fine bituminous powder is further contained.

12. A fluorine-containing elastomer composition according to Claim 10, wherein not more than 40 parts by weight of a flat filler is further contained.

13. A fluororubber-based sealing material obtained by curing molding of a fluorine-containing elastomer composition according to Claim 10, 11 or 12.

14. A fluororubber-based sealing material according to Claim 13, for use as a sealing material for automobile fuel.

15. A fluororubber-based sealing material according to Claim 13, which has a  $\text{TR}_{10}$  value of not more than  $-30^\circ\text{C}$  according to ASTM D1329 and a methanol swelling rate of not more than +50% at  $25^\circ\text{C}$  for 168 hours

according to JIS K6258.

16. A fluororubber-based sealing material according to Claim 14, which has a  $TR_{10}$  value of not more than  $-30^{\circ}\text{C}$  according to ASTM D1329, and a methanol swelling rate of not more than +50% at  $25^{\circ}\text{C}$  for 168 hours according to JIS K6258.